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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,409	07/30/2003	Ramanath Narayan Bhat		9011

7590 08/01/2005  
Ramanath Bhat  
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EXAMINER

NGUYEN, CAM N

ART UNIT PAPER NUMBER

1754

DATE MAILED: 08/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/630,409

Applicant(s)

BHAT ET AL.

Examiner

Cam N. Nguyen

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02/16/05 or 05/26/05 (an election).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) 1 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                                       |                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>originally filed</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### Claim Objections

2. Claim 2 is objected to because of the following informalities:

- A. In line 2, "catalysts" should be changed to --catalyst--.
- B. In line 3, "the range" should be changed to --a range--.
- C. In line 3, -- , -- should be inserted before "wherein".

Appropriate correction is required.

3. Claims 2 & 3 are objected to because they are depending upon withdrawn (nonelected) claim(s). Since the elected claims are drawn to a different invention, in this case, a process of using a catalyst of claim 1, the elected claims must be amended in such as way to include the catalyst limitations within the claims elected.

### Claim Rejections - 35 USC § 112 (Second Paragraph)

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, line 1, the term "*improved*" in the claim is considered as "not" part of applicants' invention. The inclusion of this term renders the claim confusing and unclear as to what is to regard as applicants contribution. If the instant invention is an improvement in an otherwise old process, then the use of the format set forth in 37 CFR 1.75(e) is suggested.

**Claim Rejections - 35 USC § 103**

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2 & 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leftin et al., "hereinafter Leftin", (US Pat. 4,539,310) in view of Senes et al., "hereinafter Senes", (US Pat. 3,533,963).

Leftin discloses a process for steam reforming hydrocarbon feeds, such as methane and naphtha containing from about 1 part per million to about 5 weight percent sulfur, to produce gases using a sulfur resistant catalyst having a plurality of oxides consists essentially of: (a) an amount of nickel oxide, (b) an amount of one or more oxides of the lanthanide series having atomic numbers from 57 through 71 (which would

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include both the lanthanum oxide and cerium oxide); and (c) an amount of zirconium dioxide (see col. 13- col. 14, claim 1; col. 3, ln 65- col. 4, ln 32). The steam reforming process is carried out at a temperature in the range of 600°C to 1000°C (see col. 4, ln 33-38).

Leftin discloses the claimed steam reforming process using a similar catalyst, except that the catalyst of Leftin does not include the "aluminum oxide" and "chromium oxide".

It would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have incorporated these metal oxide components into the catalyst of Leftin in order to achieve an improved catalyst having stable structure and enhanced in mechanical strength because "aluminum oxide" is a known support material for improving the mechanical strength of the catalysts and "chromium oxide" is also a known stabilizer for stabilizing steam reforming catalysts, as evidenced by Senes (see Senes at col. 6, claim 1).

#### **Citations**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. All references are cited for related art. See PTO-892 Form attached.

**Conclusion**

9. Claims 1-3 are originally pending. Claim 1 is withdrawn due to nonelected (distinct) invention. Claims 2-3 are rejected. No claims are allowed.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam N Nguyen, whose telephone number is 571-272-1357. The examiner can normally be reached on M, W, R, & F, 8:45 AM - 5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nguyen/cnn *cnn*  
July 25, 2005

*Cam N. Nguyen*  
CAM N. NGUYEN  
PRIMARY EXAMINER  
*AV-1754*